

Claims

[c1] What is claimed is:

1. A welding apparatus comprising:

an enclosure;

a power source constructed to output an electrical signal suitable to welding and disposed within the enclosure;

and

a shielding gas regulator disposed within the enclosure.

[c2] 2. The welding apparatus of claim 1 further comprising a gas cylinder connected to the shielding gas regulator and located at least partially within the enclosure.

3. The welding apparatus of claim 2 wherein the gas cylinder is disposable.

[c3] 4. The welding apparatus of claim 2 further comprising a second gas cylinder connected to the shielding gas regulator and outside the enclosure.

[c4] 5. The welding apparatus of claim 4 wherein the second gas cylinder is connected to the shielding gas regulator by a quick connector.

[c5] 6. The welding apparatus of claim 1 further comprising an electric valve downstream of the shielding gas regula-

tor that allows on/off flow therethrough.

[c6] 7. The welding apparatus of claim 1 further comprising a valve and a gauge attached to the shielding gas regulator and accessible from outside the housing.

[c7] 8. The welding apparatus of claim 1 further comprising a valve attached to the shielding gas regulator and adjustable from within the housing.

[c8] 9. A welding device comprising:
a housing having a base and a cover;
a welding power source disposed within the housing and constructed to generate a signal suitable for welding;
a first gas path originating at a regulator located in the housing and constructed to provide a gas from a first source to a welding torch; and
a second gas path constructed to provide gas from another source to a welding torch.

[c9] 10. The device of claim 9 wherein the regulator further comprises a valve and a gauge accessible from one of inside and outside the housing.

[c10] 11. The device of claim 9 further comprising a gas cylinder attached to the regulator in the first gas path and enclosed in the housing.

- [c11] 12. The device of claim 9 wherein the first gas path and second gas path intersect within the housing.
- [c12] 13. The device of claim 9 wherein the second gas path further comprises a connector extending through the housing and arranged to engage a gas cylinder.
- [c13] 14. The device of claim 11 wherein the connector is a quick connector.
- [c14] 15. The device of claim 9 further comprising an opening in the housing constructed to allow passage of a gas cylinder therethrough and into engagement with the regulator therein.
- [c15] 16. The device of claim 9 wherein the power source is at least one of an inverter, an energy storage device, and a combination of an inverter and an energy storage device constructed to output an electrical signal capable of welding.
- [c16] 17. A method of constructing a welding apparatus comprising:
providing a power source constructed to provide a signal suitable to welding;
providing a regulator constructed to engage a welding gas cylinder; and
enclosing the power source and the regulator in an en-

closure.

- [c17] 18. The method of claim 17 further comprising passing a welding gas cylinder through an opening in the enclosure and into engagement with the regulator.
- [c18] 19. The method of claim 18 further comprising providing a valve downstream of the regulator that is electronically controlled.
- [c19] 20. The method of claim 17 further comprising providing a connection in communication with the regulator and passing through the enclosure to engage a welding gas cylinder external thereto.
- [c20] 21. The method of claim 17 further comprising extending at least one of a valve and a gauge attached to the regulator through the enclosure.
- [c21] 22. A method of refilling a gas storage device in a welding power supply comprising:
at least partially enclosing a gas storage device within a housing of the welding power supply;
attaching the gas storage device to a regulator; and
directing a shielding gas flow from an external source into the gas storage device.
- [c22] 23. The method of claim 22 further comprising the step

of delivering shielding gas from the gas storage device to a weld.